

REMARKS

This is a full and timely response to the outstanding non-final Office Action mailed August 15, 2005. Through this response, claims 8, 19-23, and 29-31 have been amended. In particular, claim 8 has been amended to incorporate claims 17 and 18, the latter of which was deemed allowable if incorporated into independent claim 8, and claim 23 has been amended to incorporate claims 26-28, the latter of which was deemed allowable if incorporated into independent claim 23. Claims 19-22 and 29-31 have been amended to correct for proper antecedent basis. Also through this response, claims 1-7, 17-18, and 26-28 have been canceled without prejudice, waiver, or disclaimer. Additionally, through this response, Applicant has added new claims 45-54 to include a claim directed to a transceiver having the allowable features of an amplifier system found independent claim 32. Reconsideration and allowance of the application and pending claims 8-16, 19-25, and 29-54 are respectfully requested.

I. Allowable Subject Matter

Applicant appreciates the Examiner's indication that claims 18-20 and 28 would be allowable if rewritten to include all of the limitations of the base claim and any intervening claims. As described above, Applicant has amended independent claims 8 and 23 to incorporate allowable claims 18 and 28, respectively.

In that it is believed that every rejection has been overcome, it is respectfully submitted that each of the claims that remains in the case is presently in condition for allowance.

II. Claim Rejections - 35 U.S.C. § 103(a)

A. Rejection of Claims 1, 3-17, 21-27 and 29-31

Claims 1, 3-17, 21-27 and 29-31 have been rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Applicant's alleged admitted prior art as presented on pages 1-9 of the instant application (AAPA) in view of *Cyrusian et al.* ("Cyrusian," U.S. Pat. No. 6,570,447). Applicant respectfully traverses this rejection, but considers the rejection moot due to cancellation of claims 1-7, and amendment of independent claims 8 and 32 to incorporate features pertaining to claims deemed allowable. In that it is believed that every rejection has been overcome and/or rendered moot, it is respectfully submitted that each of the claims that remains in the case is presently in condition for allowance.

B. Official Notice Statements

The Office Action has asserted the following statements with regard to Official Notice:

It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize bi-polar transistors for the differential MOSFET transistors of *Cyrusian* since the examiner takes Official Notice of the equivalence of bipolars and MOSFETs for their use in the electronic art and the selection of any of these known equivalents to provide a transistor function would be within the level of ordinary skill in the art.

Claims like claims 5 and 6 recite a second differential amplifier arrangement having the same structure as that of the first. Claim 5 is clearly met from that above but from claim 6 it appears that these two amplifier arrangements are cascaded, i.e. connected in series, but again claim 6 recites function and no structure to enable that function. However, providing amplifiers in cascade to form a single amplifier unit of higher gain than either one alone is common in the art and is an art recognized equivalent structure to a single amplifier. It would have been obvious to one having ordinary skill in the art at the time the invention was made to replace the single amplifier arrangement made obvious above with two of the same type connected in cascade since the examiner takes Official Notice of the

equivalence of a single amplifier and two amplifiers connected in cascade for their use in the electronic art and the selection of any of these known equivalents to provide an amplifier function would be within the level of ordinary skill in the art. One of ordinary skill in the art would have been additionally motivated to make the combination so as to utilize amplifiers with less overall gain. Typically lower gain amplifiers have less noise and are less expensive than a single high gain amplifiers and it is a real advantage known to those of ordinary skill to utilize amplifiers with less noise and less expense in a cascade arrangement.

With respect to claims like claim 15, here the opposite conductivity type transistors are employed over the prior art transistor types. Claim 15 forms the same basic circuit as claim 14 that is obvious as indicated above except that the conductivity types are opposite that of claim 14. However, it is generally known that an art recognized equivalent circuit is formed from transistors of opposite conductivity type than the original circuit. Thus it would have been obvious to one having ordinary skill in the art at the time the invention was made to reverse the conductivity of the transistor elements of the prior art as well as apply the appropriate voltage since the examiner takes Official Notice of the equivalence of a circuit formed of having transistors of a certain conductivity type(s) and the same circuit wherein the conductivity types are opposite that of the first in the electronic art and the selection of any of these known equivalents to provide circuit that works on opposite conductivity types yet retain the same basic function of the first circuit would be within the level of ordinary skill in the art.

Although Applicant regards the rejection to be rendered moot, to avoid the implication that the Applicant agrees with these statements, Applicant respectfully traverses these findings of well-known art and submit that the subject matter noted above should not be considered well known since the Office Action does not include specific factual findings predicated on sound technical and scientific reasoning to support the conclusions, as required. The Manual of Patent Examining Procedure (MPEP) defines the standard for taking official notice. As provided in MPEP § 2144.03:

Official notice without documentary evidence to support an examiner's conclusion is permissible only in some circumstances. While "official notice" may be relied on, these circumstances should be rare when an application is under final rejection or action under 37 CFR 1.113. Official notice unsupported by documentary evidence should only be taken by the examiner where the facts

asserted to be well-known, or to be common knowledge in the art are capable of instant and unquestionable demonstration as being well-known. As noted by the court in *In re Ahlert*, 424, F.2d 1088, 1091, 165 USPQ 418, 420 (CCPA 1970), the notice of facts beyond the record which may be taken by the examiner must be “capable of such instant and unquestionable demonstration as to defy dispute” (citing *In re Knapp Monarch Co.*, 296 F.2d 230, 132 USPQ 6 (CCPA 1961)).

As provided in MPEP § 2144.03 (emphasis added):

If applicant adequately traverses the examiner’s assertion of official notice, *the examiner must provide documentary evidence in the next Office action* if the rejection is to be maintained. See 37 CFR 1.104(c)(2).

Accordingly, Applicant traverses the Examiner’s use of official notice. Because of this traversal, the Examiner must support his finding with evidence, or withdraw the official notice determination.

C. Inherency Statements

Applicant respectfully traverses the findings with regard to inherency. In particular, the Office Action (page 3) alleges the following:

When control voltages Vc1 and Vc2 are substantially similar in value (e.g. zero volts differential input control voltage), and an emitter degeneration element 708 and collector load 716 comprising of the same type of variable resistance is used, the gain of the IF VGA 650a is substantially constant despite changes in voltage supply...”. Therefore for these reasons above *Cyrusian* inherently provides for the functional language of at least claim 1.

These findings of inherency are traversed as not having been shown to be necessarily present. In particular, it is not clear from the reasoning provided on page 3 of the Office Action where in *Cyrusian* the control voltages exist to provide the substantially constant gain. Although Applicant regards the rejection to be rendered moot, to avoid the implication

that the Applicant agrees with these statements, Applicant respectfully traverses these findings of inherency and respectfully requests clarification for supporting that these features necessarily follow from the teaching of *Cyrusian* or withdraw the finding of inherency.

III. Canceled Claims

As identified above, claims 1-7, 17-18, and 26-28 have been canceled have been canceled from the application through this Response without prejudice, waiver, or disclaimer. Applicant reserves the right to present these canceled claims, or variants thereof, in continuing applications to be filed subsequently.

IV. New Claims

As identified above, claims 45-54 have been added into the application through this Response. Applicant respectfully submits that these new claims describe an invention novel and unobvious in view of the prior art of record and, therefore, respectfully requests that these claims be held to be allowable.

CONCLUSION

Applicant respectfully submits that Applicant's pending claims are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. Any other statements in the Office Action that are not explicitly addressed herein are not intended to be admitted. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (770) 933-9500.

Respectfully submitted,



David Rodack
Registration No. 47,034

THOMAS, KAYDEN,
HORSTEMEYER & RISLEY, L.L.P.
Suite 1750
100 Galleria Parkway N.W.
Atlanta, Georgia 30339
(770) 933-9500